

Science

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Antarctica: The Science Continent

by Nathaniel Mellard



Genre	Build Background	Access Content	Extend Language
Nonfiction	• Exploration • Antarctica • Geography and Climate • Adaptation	• Map • Fact Box • Definitions • Captions and Labels • List	• Suffix *-y* • Prefix *un-*

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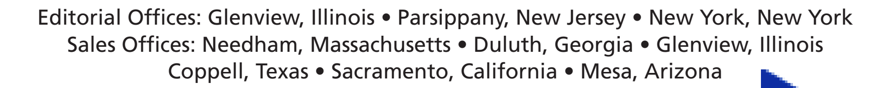


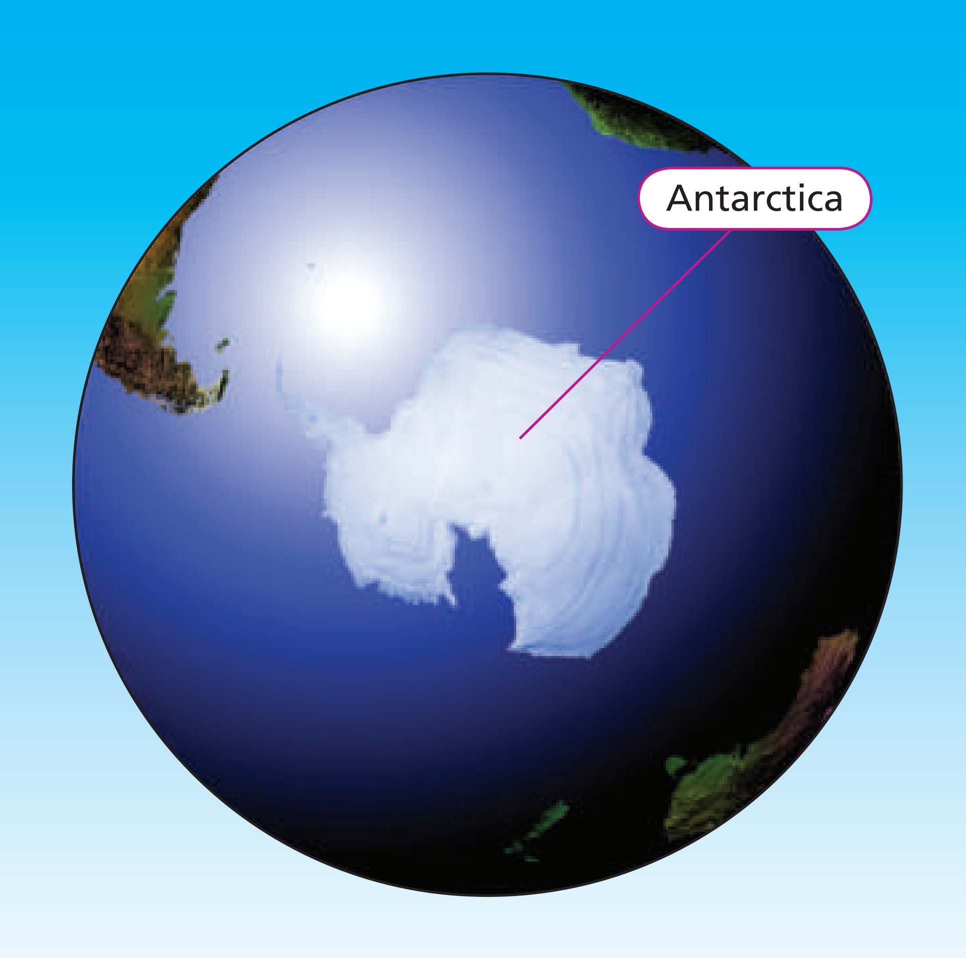
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Antarctica is a continent around the South Pole of the Earth. Antarctica is the coldest place on Earth, and it is one of the windiest places too. Even in the summer it is cold. During the summer, the sun shines all day and all night. In the winter, there is no sunshine in Antarctica. It is dark all day and all night. There is ice everywhere. Antarctica often is called the *Icy Continent.*

South Pole: the point on the Earth that is farthest south



Explorers and scientists have been interested in Antarctica for hundreds of years. Explorers are people who go to new places to find out what is there. They visit these places before there are maps, roads, airports, or stores.

Many bold explorers have traveled to Antarctica. They had many questions about the coldest place on Earth. Could people live in Antarctica? What animals lived there? Was there gold? What kind of land was under the ice?



Some of the first explorers that went to Antarctica were not prepared for the icy cold weather. They did not have enough warm clothes, food, or water. They could not adapt to the cold temperatures or to the darkness. Many explorers died before they could return home.

Extend Language **The Suffix *-y***

A suffix is an ending that can be attached to a word to form a new word. *Rain* with the suffix *-y* becomes the word *rainy*. *Rainy* means having rain. *Wind* with the suffix *-y* becomes the word *windy*. What is the meaning of *windy?* What word describes a place that has snow?



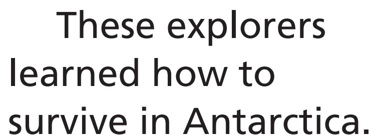


Other explorers studied how people lived in cold places before going to Antarctica. They went to Alaska and Greenland. They wanted to know how people adapted to cold weather. What kinds of clothing did they wear? What kinds of houses did they build?

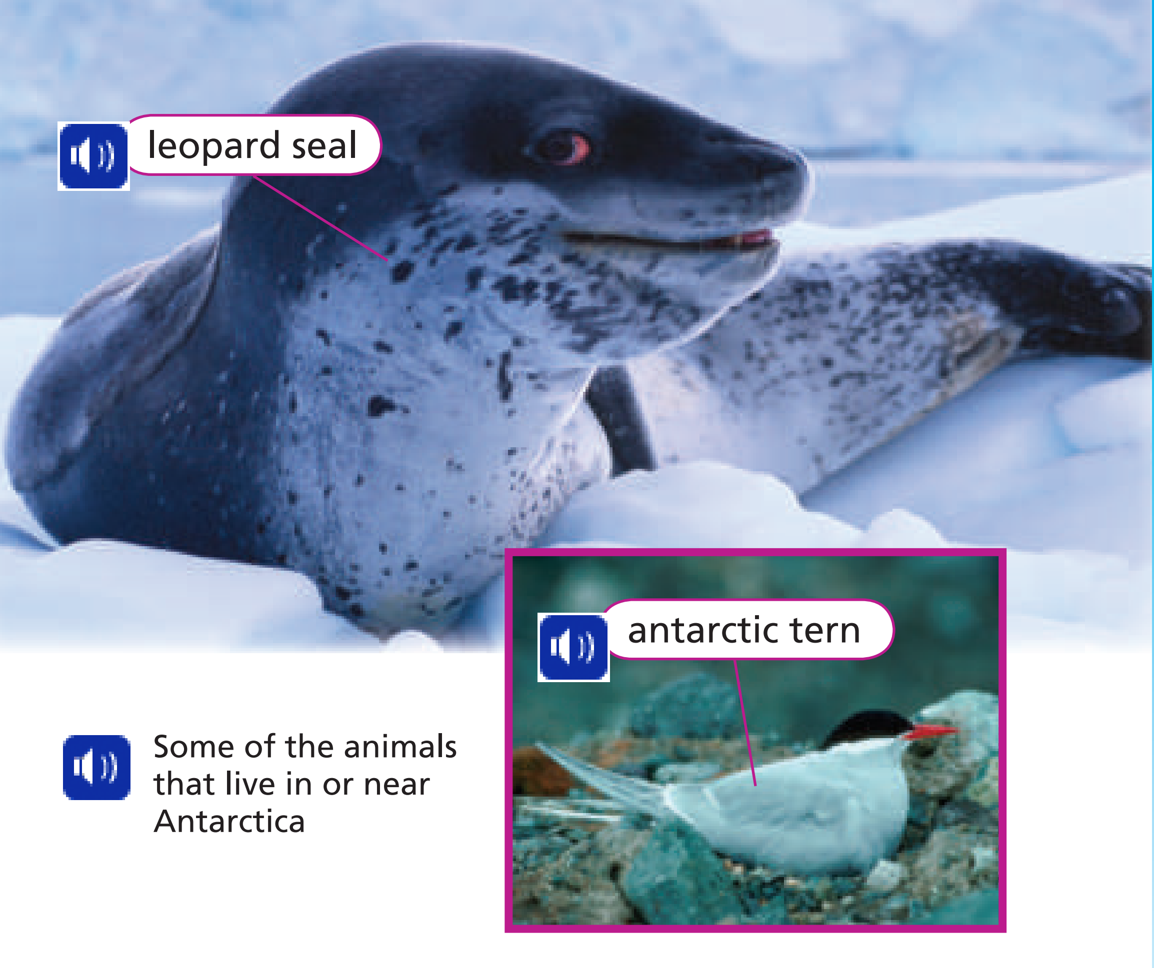


Coats were made with animal skins and lined with goose down or soft feathers.

These explorers learned how to survive in Antarctica. They wore clothes made of animal skins and goose down. They used big boots like the people in Alaska and Greenland. They brought enough food and water. These explorers returned from their trips and told people what they found.



adapted: changed something to fit different conditions



Some of the animals that live in or near Antarctica

After the explorers went to Antarctica, scientists wanted to go there, too. Scientists are people who study nature and why things happen. Many scientists wanted to study the glaciers in Antarctica. Others wanted to study the rocks and volcanoes. Some scientists wanted to study the animals in Antarctica or in the ocean waters near Antarctica. They wanted to find out how animals could live in such cold places. Others wanted to study the ocean and the climate.

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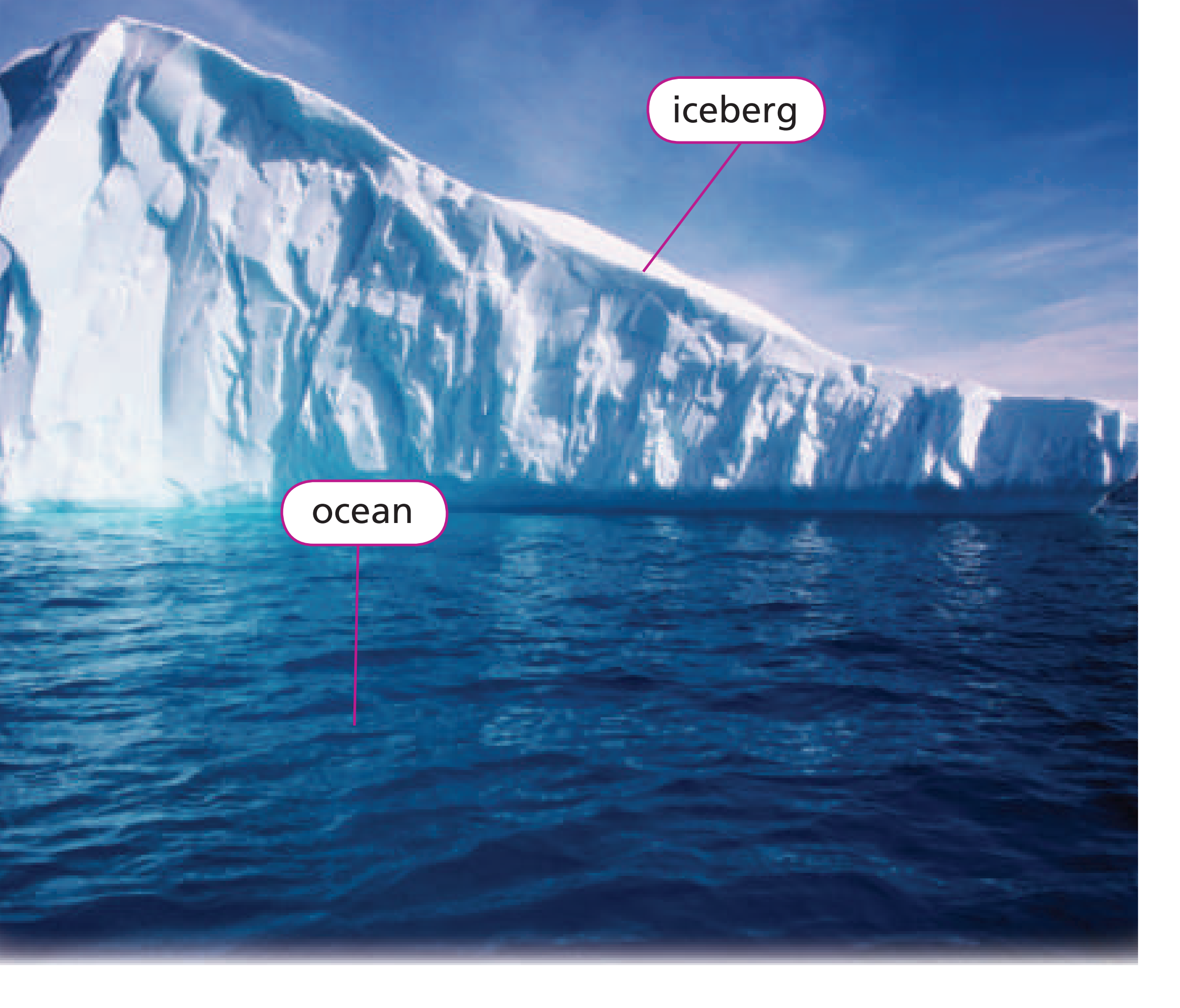
glaciers: large, slow-moving rivers of ice

climate: the kind of weather that a place has



Emperor penguin and its baby

Scientists had many questions about the coldest place on Earth. How can animals adapt to such a cold place? Why don't the fish freeze when they are swimming in ice water? How do penguins raise their babies on the ice and snow? Where do whales go when part of the ocean is frozen?




A floating iceberg on the coast of Antarctica

Scientists also wanted to know about the ice in Antarctica. How big are the icebergs that float in the ocean? How far do Antarctic icebergs travel? Will the icebergs melt into the ocean someday? How do changes in or near Antarctica affect the rest of the world? Scientists from all over the world wanted to know the answers to these questions.



Hundreds of people began coming to Antarctica to study and explore. But Antarctica was not ready for them. No one lived in Antarctica. There were no laws telling people how they should take care of the land and animals. What would happen if people dump garbage into the ocean? Should people dig up the ice and the land to look for gold, oil, or gas?

No country owned Antarctica. Who would make the laws to protect it? Who would save this beautiful cold place from damage?



Did You Know? **Antarctica**

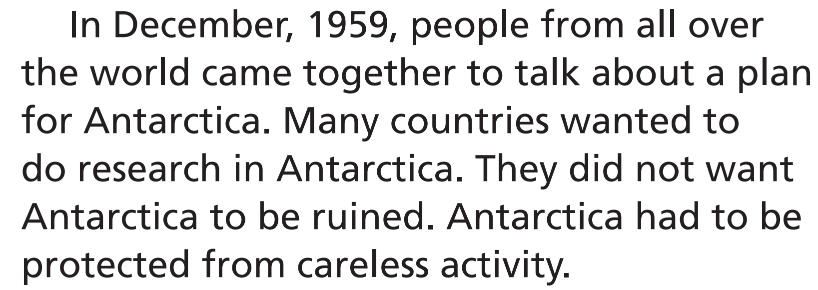
- Antarctica is larger than the United States in land area. There are no human residents who live permanently in Antarctica. About 4,000 people visit Antarctica every year. Some come to study; others come just to see this cold continent.
- The coldest temperature ever recorded on Earth was at the South Pole, in the middle of Antarctica. It was –128.6 degrees Fahrenheit (–89 degrees Celsius).







Signs put up in Antarctica by the scientists from different countries of the world


In December, 1959, people from all over the world came together to talk about a plan for Antarctica. Many countries wanted to do research in Antarctica. They did not want Antarctica to be ruined. Antarctica had to be protected from careless activity.

People from many governments wrote the Antarctic Treaty. It was an agreement about how to take care of Antarctica. Countries around the world agreed to certain rules. Since the first treaty was written, there have been more agreements on ways to protect the land and animals in Antarctica.

Treaty Rules

1. *No one will test bombs or weapons in Antarctica.*
2. *Scientists from any country may do research in Antarctica.*
3. *Scientists and other people will cooperate and share information.*
4. *Antarctica will not belong to any country.*
5. *No one may dump radioactive waste.*
6. *No secrets! People may see what others are doing in Antarctica.*
7. *No one may kill animals such as seals, penguins, and whales.*
8. *No one may drill for oil or look for other minerals to make money.*


These treaty rules protect Antarctica so it can always be a continent dedicated to science!


radioactive waste: garbage that gives off harmful rays





Now, many years after the first brave explorers traveled to Antarctica, the coldest continent has many research stations. People study animals, plants, rocks, volcanoes, air, ozone, weather, oceans, and ice. About twenty-nine different countries cooperate in running these stations. Some countries share research stations. They do not want to build unnecessary buildings or create more pollution. Antarctica has become the world's only "science continent." Antarctica is very important to everyone.

ozone: a form of the gas oxygen



Talk About It

1. What details about Antarctica show that it is a very cold place where it is hard to live?
2. Do you think the treaty for the use of Antarctica is a good idea? Why?

Write About It

3. Pretend that your classroom needs rules. On a separate sheet of paper, write rules that you think will keep your classroom in order. How should students help take care of the classroom?

Extend Language

Prefixes are attached to the beginning of words to make new words. The prefix *un-* means "not." *Un-* added to *true* makes the word *untrue*. *Untrue* means "not true." What is the word on page 12 that means "not necessary"?

Photographs
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